

Gonorrhea **(*Neisseria gonorrhoeae*)**

I. INTRODUCTION

Gonorrhea is a sexually transmitted disease caused by *Neisseria gonorrhoeae*, a gram-negative, intracellular diplococcus. It most commonly involves the cervix, urethra, rectum and pharynx. Complications include pelvic inflammatory disease, ectopic pregnancy, infertility, and Bartholinitis in women; prostatitis, epididymitis and proctitis in men. Gonorrhea may also invade the bloodstream leading to disseminated gonococcal infection, which is characterized by arthritis and skin lesions. If gonorrhea is transmitted to the newborn, it may result in corneal perforation and blindness.

Gonorrheal genital infection is the second most reported STI in the United States and prevalence is highest in persons less than 25 years of age. All clients found to have gonorrhea should be tested for other STIs (chlamydia, syphilis, HIV).

II. HISTORY AND EVALUATION

- A. History may include:
 - 1. Previous gonococcal infection
 - 2. Recent change in sexual partner
 - 3. Partner with symptoms of *N. gonorrhoeae*
 - 4. Lack of STI protection (condom use)
 - 5. Report of multiple sexual partners
 - 6. Symptoms of gonococcal infection
 - 7. Reports of engaging in commercial sex work
 - 8. Infected partner
- B. Symptoms may include (Note: men and women with *N. gonorrhoeae* infection may not have symptoms until the infection is advanced. Symptoms may also be similar to that of *C. trachomatis*):
 - 1. In women:
 - a. Dysuria
 - b. Abdominal and/or pelvic pain
 - 2. In men:
 - a. Dysuria
 - b. Epididymitis
 - c. Testicular Pain
- C. Physical exam findings may include
 - 1. In women:
 - a. Mucopurulent, endocervical discharge, with edema, erythema and endocervical bleeding
 - b. Tenderness, guarding or rigidity on abdominal palpation
 - c. Enlargement, tenderness and/or redness of the Skene's glands, urethra and Bartholin's glands
 - d. Cervical motion tenderness
 - 2. In men:

- a. Discharge from penis
- b. Pain on testicular palpation

III. SCREENING AND DIAGNOSIS

- A. Diagnosis is made by culture of endocervical (women) or urethral (men) swab, or by Nucleic Acid Amplification Test (NAAT) of a urine, urethral, cervical, vaginal or rectal specimen.
- B. Testing for *N. gonorrhoeae* infection is indicated in anyone with the signs of symptoms listed above, in women with symptoms of PID or in anyone who is the sexual partner of someone known to have gonorrhea regardless of the presence of signs or symptoms.
- C. Annual screening for *N. gonorrhoeae* infection is recommended for all sexually active women aged <25 years and for older women at increased risk for infection (e.g., those who have a new sex partner, more than one sex partner, a sex partner with concurrent partners, or a sex partner who has an STI).
- D. Routine screening for *N. gonorrhoeae* infection in men or older women at low risk is not recommended.
- E. Rectal gonorrhea and chlamydia screening in men who have sex with men should be considered in settings where there is a high risk of HIV transmission

IV. TREATMENT

- A. Clients with a positive test result or patients with symptoms and/or sexual contact with confirmed positive partner should be treated using dual antibiotic therapy (secondary to concerns of emerging drug-resistant *N. gonorrhoeae*) following the most recent CDC Sexually Transmitted Diseases Treatment Guidelines. These can be accessed at CDC website: <http://www.cdc.gov/std/treatment/default.htm>
- B. Patients infected with *N. gonorrhoeae* frequently are coinfecting with *C. trachomatis* so these patients should also be treated routinely with a regimen that is effective against uncomplicated genital *C. trachomatis* infection
- C. To maximize compliance with recommended therapies, medications for gonococcal and chlamydial infections should be dispensed on site, and first dose should be directly observed.
- D. Sexual partners should be treated as well. Ideally, partners will be seen and treated directly, but expedited partner treatment can also be undertaken.
 - Expedited partner therapy
 - a. (EPT) is the clinical practice of treating the sex partners of patients diagnosed with chlamydia or gonorrhea by providing prescriptions or medications to the patient to take to his/her partner without the health care provider first examining the partner.
 - b. For partners who are unlikely to access timely evaluation and treatment, the CDC recommends EPT (via a prescription provided to client or to partner).
 - c. In Maryland, EPT can be provided either by treatment directly with medications, or by providing a prescription. Details regarding Maryland's EPT program/law can be found at:

<http://phpa.dhmh.maryland.gov/OIDPCS/CSTIP/Pages/Expedited%20Partner%20Therapy.aspx>

- d. Medication or prescriptions provided as part of EPT should be accompanied by treatment instructions, appropriate warnings about taking medications (if the partner is pregnant or has an allergy to the medication), general gonorrhea health education and counseling, and a statement advising that partners seek personal medical evaluation, particularly women with symptoms of PID
- e. Since recommended first-line treatment for gonorrhea includes an injected medication, if undergoing EPT, oral treatment (cefixime plus azithromycin) may be preferred.

V. SPECIAL TREATMENT CONSIDERATIONS

- A. Doxycycline, ofloxacin, and levofloxacin are contraindicated in pregnant women. Azithromycin is safe and effective. Repeat testing 3 to 4 weeks after completion of therapy with the following regimens is recommended for all pregnant women to ensure therapeutic cure. Pregnant women diagnosed with a gonococcal infection during the first trimester should not only receive a test 3-4 weeks after completion of treatment to document eradication, but be retested 3 months after treatment to evaluate for re-infection.
- B. Of note is that non-pregnant clients do not need a “test of cure” testing (see “Follow-up” section below).

VI. CLIENT EDUCATION/COUNSELING

- A. Sexual partner and any sexual contacts in the last 60 days preceding onset of symptoms or diagnosis must be informed of possible infection and provided with written materials about the importance of seeking evaluation for any symptoms suggestive of complications (e.g., testicular pain in men and pelvic or abdominal pain in women).
- B. Timely treatment of sex partners is essential for decreasing the risk for re-infection.
- C. Patients should be instructed to abstain from sexual intercourse until they and their sex partners have completed treatment. Abstinence should be continued until 7 days after a single-dose regimen or after completion of a multiple-dose regimen.
- D. Provide a medication information sheet.
- E. Provide STI education and information.
- F. Provide current educational information on *N. gonorrhoeae*.
- G. Provide contraceptive information, as indicated.
- H. Encourage consistent and correct condom use to prevent STIs.

VII. FOLLOW-UP

- A. Except in pregnant women, test-of-cure (i.e., repeat testing 3–4 weeks after completing therapy) is **not** advised for persons treated with the recommended or alternative regimens, unless therapeutic compliance is in question, symptoms persist, or re-infection is suspected.
- B. Clients that had a *N. gonorrhoeae* infection should be retested approximately 3 months after treatment to ensure that they are not re-infected. If retesting was not done at 3 months, clinicians should retest whenever the client next presents for medical care in the 12 months following initial treatment.
- C. The following patients should be referred to the medical director or other provider as appropriate:
 - 1. Clients with multiple re-infections
 - 2. Pregnant clients – (refer to prenatal care)

VIII. REPORTING

Maryland law requires provider and laboratory reporting of all cases of *N. gonorrhoeae* infections. Reporting instructions and forms can be accessed via the Maryland DHMH website: <http://phpa.dhmf.maryland.gov/Pages/reportable-diseases.aspx>

REFERENCES:

CDC: Sexually Transmitted Disease Treatment Guidelines, 2015